



# **STOCKPILE REPORT**

## **to the Congress**



**JULY - DECEMBER 1959**

**EXECUTIVE OFFICE OF THE PRESIDENT  
OFFICE OF CIVIL AND DEFENSE MOBILIZATION  
WASHINGTON 25, D.C.**



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OFFICE OF THE DIRECTOR

May 1960

The Honorable  
The President of the Senate

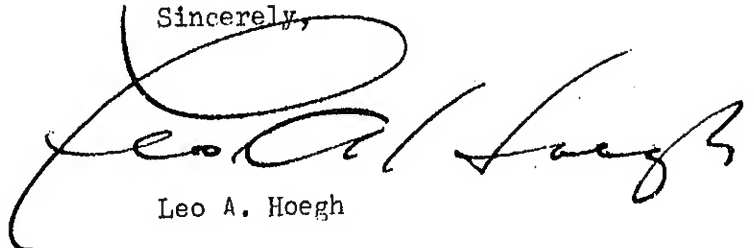
The Honorable  
The Speaker of the House of Representatives

Sirs:

There is presented herewith the semiannual report to the Congress on the strategic and critical materials stockpiling program for the period July 1 to December 31, 1959. A classified statistical supplement to this report has been transmitted to you under separate cover.

This report is submitted pursuant to Section 4 of the Strategic and Critical Materials Stock Piling Act, Public Law 520, 79th Congress.

Sincerely,

A large, stylized handwritten signature in dark ink, appearing to read 'Leo A. Hoegh', is written over the typed name.

Leo A. Hoegh



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## Summary

This report covers principal activities in stockpile planning and operations for the period July 1 through December 31, 1959, under the provisions of Public Law 520 (79th Congress), The Strategic and Critical Materials Stock Piling Act.

Stockpile policies were revised after an interagency review and the revisions were announced in Defense Mobilization Order V-7 of December 10, 1959.

Strategic stockpile inventories for the 75 materials on the stockpile list as of December 31 approximately equaled or exceeded maximum objectives for 54 materials and basic objectives for 64 materials. Quantities in other Government inventories, if added to the strategic stockpile, would change these totals to 62 and 70 respectively.

The total strategic stockpile inventory of specification-grade Group I materials was valued at \$6.1 billion on the basis of December 31, 1959, market prices; \$4.3 billion of this amount was applicable to the maximum objectives, which were valued at \$4.7 billion, and \$1.8 billion represented excess inventories for some of the Group I materials acquired under previously higher objectives.

Commitments were made during the six months' period for open-market purchases having a market value of \$830,000 at December 31 prices.

Materials valued at approximately \$16 million were delivered to the strategic stockpile as a result of previous commitments. Of this amount, \$2 million was applicable to strategic stockpile objectives in effect as of December 31. Materials on order at the end of the period were valued at \$15 million, with \$1 million applicable to stockpile objectives.

Cancellation of commitments between July and December, for deliveries of materials to the strategic stockpile in excess of maximum objectives, reduced Government obligations by \$2.6 million. Efforts to cancel commitments for outstanding deliveries of excesses are continuing.

Studies of emergency supply and requirements estimates led to the restoration of three materials, corundum, kyanite-mullite, and sapphire and ruby, to Group I of the List of Strategic and Critical Materials for Stockpiling, and the removal of one material, palm oil, from the stockpile list.

Sales commitments for the disposal of excess and obsolete materials from the strategic stockpile and DPA inventories totaled \$24.2 million. Of this total, \$20.2 million represented disposals without replacement, of the rotation materials abaca, rubber, and raw silk, under provisions of Public Law 86-255.

Legislation was proposed to the Congress that would permit disposal of surplus natural rubber in the stockpile.

## Stockpile Policies

On December 10, 1959, the Director of the Office of Civil and Defense Mobilization (OCDM) issued a revision of Defense Mobilization Order V-7 (DMO-V-7), "General Policies for Strategic and Critical Materials Stockpiling," originally issued June 30, 1958. Incorporated in this order are certain provisions of DMO-V-3, "Policy Regarding Surplus Materials Acquired Under the Defense Production Act," which has now been canceled. The revised order, which was published in the Federal Register of December 19, 1959, is attached to this report as Appendix B. The policies were revised with the advice of all agencies concerned with the stockpiling of materials.

### NOTES ON THE REVISED POLICIES

**Stockpile Objectives.** DMO-V-7, as originally issued June 30, 1958, directed that stockpile objectives be adequate for limited or general war. This planning concept, together with one that objectives be limited to meeting estimated shortages of materials for a 3-year period, is continued in the revised order. Although the stockpile reviews take into account the supply-requirements situation for a 3-year emergency, the stockpile objective may cover a shorter period depending upon the time required for supplies to match the essential needs of the emergency.

A safeguard against drawing down Government-owned inventories prematurely is implicit in the provision that "Until such time as the essential needs of the nation in the event of a nuclear attack (including reconstruction) can be determined, the maximum objective shall not be less than six months' usage by industry in the United States in periods of active demand." It is expected that for most of the present list of stockpile materials the maximum objectives will exceed the six months' industry usage and that in a majority of cases the objectives established against a deficit in an emergency short of attack on the U. S. will be adequate to meet deficits in the event of attack.

The reduction of the stockpile planning period from the 5-year period, which was in effect from the beginning of the post-World War II program, to a 3-year period left many of the inventories in a surplus position. For many materials the strategic stockpile inventories alone either are approximately equal to or exceed the maximum objectives in effect as of December 31, 1959. Additional maximum objectives would be met if quantities of materials in other Government inventories were transferred to the strategic stockpile.

**Cancellation of Commitments.** The basic policy remains unchanged with respect to cancellation or reduction of commitments for delivery of materials to strategic stockpile and DPA inventories that would be excess to maximum stockpile objectives.

However, the Defense Mobilization Order now provides that settlements may include payment of the premium portion of premium price contracts. Settlements also may be made by payment-in-kind, which provides a means for reducing not only the cash outlay but excess quantities already on hand in Government inventory as well. The arrangements for such cancellations must not be disruptive to the economy or to projects essential to the national security. Consideration also may be given to converting cash contracts involving excess materials, to barter contracts, which could have the added advantage of disposing of surplus agricultural commodities.

**Retention of Defense Production Act (DPA) Inventories.** Stockpile policy stipulates that preference in disposals shall be given to materials in the Defense Production Act inventories. Stockpile-grade materials acquired under the Defense Production Act are to be retained, however, when needed to help meet unfilled stockpile objectives in accordance with a long-time Government practice which was expressed not only in the original DMO-V-7 but in DMO-V-3. The incorporation of this provision in the revised DMO-V-7 together with other policies that are applicable to the DPA inventories eliminated the need for DMO-V-3.

**Direct Government Use.** With a view to using some of the excess of Government-owned materials, Government agencies that are direct users of the materials are now required to fulfill their requirements, insofar as practicable, from Government inventories.

**Disposals.** The policy concerning disposal of excess strategic and critical materials has been redefined. In addition to the policies discussed above, emphasis has been placed on interagency concurrence in disposals. The new order makes it clear that the Government will continue to assess the impact of possible disposals upon the usual markets and upon the international interests of the United States.

The excess in strategic stockpile and DPA inventories of specification-grade materials for which there are stockpile objectives amounted to \$2.4 billion at December 31 market prices.

Under present legislation, materials in the strategic stockpile cannot be disposed of without notice to the Congress and a publication of the notice in the Federal Register six months prior to disposal. When disposal is for reasons other than obsolescence as defined in the Stock Piling Act, the express approval of the Congress is required.

The DPA inventory is under no legislative restriction with respect to disposal except that the materials cannot be sold at less than market price. In the revised order, however, administrative controls have been adopted for the DPA disposals.

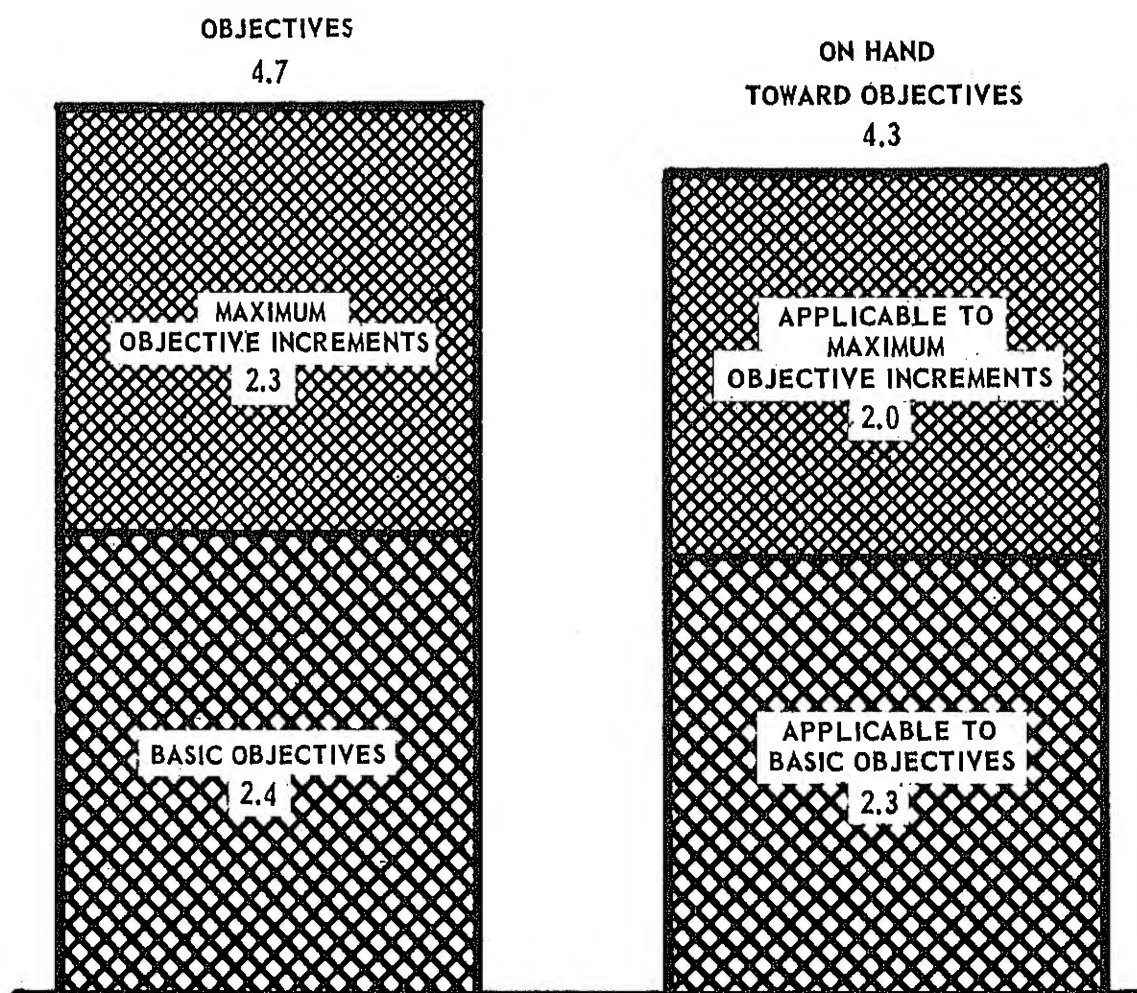


CHART 1

STOCKPILE OBJECTIVES AND APPLICABLE STRATEGIC STOCKPILE INVENTORIES

AS OF DECEMBER 31, 1959

( IN BILLIONS OF DOLLARS, BASED ON DECEMBER 31, 1959, MARKET PRICES )



*Quantities in excess of certain maximum objectives, valued at \$1.8 billion, and outstanding commitments of \$15 million are not included.*

## Status of Strategic Stockpile Inventories

### ACHIEVEMENT OF STOCKPILE OBJECTIVES

On December 31, 1959, as shown by Table A, strategic stockpile inventories for the Group I materials (those for which there are official stockpile objectives) equaled or exceeded the maximum objectives for 54 materials and the basic objectives for 10 additional materials. Total dollar value of the objectives and applicable inventories is shown in Chart 1.

Quantities of materials in other Government-owned inventories, if transferred to the strategic stockpile, would increase to 62 the number of maximum objectives and to 70 the number of basic objectives met by total Government inventories as of December 31.

Total specification-grade inventories of Group I materials in the strategic stockpile, amounting to 26 million tons, were valued at \$6.1 billion on the basis of December 31 market prices, compared with a June 30 market valuation of \$5.78 billion and an acquisition cost of \$5.9 billion. The greater part of the change in market value is due to increased prices of 4 stockpile materials: aluminum, copper, rubber and tungsten. Of the aforementioned inventories, \$2.3 billion was applicable to the basic objectives which are valued at \$2.4 billion, and \$2.0 billion was applicable to the maximum objective increments valued at \$2.3 billion. Excess specification-grade inventories for some of the Group I materials, representing quantities acquired against previously higher objectives, are now valued at \$1.8 billion as against \$1.9 billion last shown.

Total outstanding commitments for the strategic stockpile amounted to approximately \$15 million, with \$14 million of this in excess of the maximum objectives in effect on December 31. Efforts to cancel some of these commitments are being continued.

TABLE A

#### *Group I of the List of Strategic and Critical Materials for Stockpiling*

The following list, which constitutes Group I of the materials in the strategic stockpile, identifies the materials for which inventories were approximately equal to or exceeded objectives in effect as of December 31, 1959.

Group I materials are acquired by purchase and by transfer of Government-owned surpluses pursuant to Sections 3 (a) and 6 (a) of Public Law 520, 79th Congress. This list, which shows achievement of objectives only if the material is actually in the strategic stockpile inventory, is subject to change as inventories increase and as stockpile

programs are revised. In some cases the quantities necessary to complete the objectives may be on order or available for transfer from other Government-owned inventories; in others, procurement toward completion of the present objectives may be deferred because of potential significant changes in the supply-requirements position.

Materials	Inventory ° equals or exceeds	
	Basic objective	Maximum objective
1. Aluminum.....	x	( <sup>1</sup> )
2. Aluminum Oxide, Fused, Crude.....	x	x
3. Antimony.....	x	
4. Asbestos, Amosite.....		
5. Asbestos, Chrysotile....		
6. Asbestos, Crocidolite (soft).....	x	x
7. Bauxite, Metal Grade, Jamaica Type.....	( <sup>1</sup> )	( <sup>1</sup> )
8. Bauxite, Metal Grade, Surinam Type.....	x	
9. Bauxite, Refractory Grade.....	x	x
10. Beryl.....	x	x
11. Bismuth.....	( <sup>1</sup> )	
12. Cadmium.....	x	x
13. Castor Oil.....	x	x
14. Celestite.....	x	x
15. Chromite, Chemical Grade	x	x
16. Chromite, Metallurgical Grade.....	x	x
17. Chromite, Refractory Grade.....	x	
18. Cobalt.....	x	x
19. Columbite.....	x	x
20. Copper.....	x	x
21. Cordage Fibers, Abaca...	x	x
22. Cordage Fibers, Sisal...	( <sup>2</sup> )	( <sup>2</sup> )
23. Corundum.....	x	x
24. Diamond Dies, Small....		
25. Diamond, Industrial: Crushing Bort.....	x	x
26. Diamond, Industrial: Stones.....	x	( <sup>1</sup> )
27. Feathers and Down, Waterfowl.....	x	x
28. Fluorspar, Acid Grade...	x	x
29. Fluorspar, Metallurgical Grade.....	x	x
30. Graphite, Natural Ceylon--Amorphous.....	x	x
31. Graphite, Natural-- Madagascar, Crystalline	x	x
32. Graphite, Natural--Other Than Ceylon and Mada- gascar, Crystalline....	x	x
33. Hyoscine.....	x	x

Materials	Inventory equals or exceeds	
	Basic objective	Maximum objective
34. Iodine.....	x	
35. Jewel Bearings.....		
36. Kyanite-Mullite.....	x	x
37. Lead.....	x	x
38. Magnesium.....	x	x
39. Manganese, Battery Grade, Natural Ore....	x	x
40. Manganese, Battery Grade, Synthetic Dioxide.....	x	x
41. Manganese, Chemical Grade, Type A Ore.....	x	x
42. Manganese, Chemical Grade, Type B Ore.....	( <sup>1</sup> )	
43. Manganese, Metallurgical Grade...	x	( <sup>1</sup> )
44. Mercury.....	x	x
45. Mica, Muscovite Block, Stained A/B and Better	x	( <sup>1</sup> )
46. Mica, Muscovite Film, First and Second Qualities.....	x	( <sup>1</sup> )
47. Mica, Muscovite Split- tings.....	x	x
48. Mica, Phlogopite Split- tings.....	x	x
49. Molybdenum.....	x	x
50. Nickel.....	x	x
51. Opium.....	x	x
52. Platinum Group Metals, Iridium.....	x	x
53. Platinum Group Metals, Palladium.....	( <sup>1</sup> )	( <sup>1</sup> )
54. Platinum Group Metals, Platinum.....	x	x
55. Pyrethrum.....	x	x
56. Quartz Crystals.....	x	x
57. Quinidine.....	x	x
58. Rare Earths.....	x	x
59. Rubber, Crude Natural..	x	x
60. Sapphire and Ruby.....	x	x
61. Selenium.....	( <sup>1</sup> )	
62. Shellac.....	x	( <sup>1</sup> )
63. Silicon Carbide, Crude	( <sup>1</sup> )	( <sup>1</sup> )
64. Silk, Raw.....	x	x
65. Silk Noils.....	x	x
66. Sperm Oil.....	x	x
67. Talc, Steatite, Block and Lump.....	x	x
68. Tantalite.....	x	x
69. Tin.....	x	x
70. Tungsten.....	x	x
71. Vanadium.....	x	x
72. Vegetable tannin Ex- tract, Chestnut.....	x	x
73. Vegetable Tannin Ex- tract, Quebracho.....	x	x
74. Vegetable Tannin Ex- tract, Wattle.....	x	x
75. Zinc.....	x	x

<sup>1</sup>Sufficient quantities are on hand on other Government-owned inventories to complete the objectives.

<sup>2</sup>With reduction in stockpile objectives subsequent to the reporting period, strategic stockpile inventory is equal to the objectives.

On February 16, 1960, rutile was transferred from Group II to Group I of the stockpile list. Government inventories are adequate for the objectives established.

TABLE B

*Group II of the List of Strategic and Critical Materials for Stockpiling*

The following list constitutes Group II of the List of Strategic and Critical Materials for Stockpiling, as of December 31, 1959. These materials are kept under surveillance, without stockpile objectives; should it become necessary to establish stockpile objectives against a potential deficit in supply, they will be transferred to the Group I list. Quantities that are in the strategic stockpile were acquired many years ago principally by the transfer of Government-owned surpluses pursuant to Section 6(a) of Public Law 520, 79th Congress. There is no wool in the strategic stockpile.

1. Mica, Muscovite Block, Stained B and Lower

2. Mica, Phlogopite Block

3. Rutile\*

4. Wool

\*Transferred to Group I of the stockpile list, February 16, 1960.

OTHER MATERIALS IN STRATEGIC STOCKPILE INVENTORY

In addition to inventories of specification-grade Group I materials, the strategic stockpile contains (1) nonspecification grades of the Group I materials and (2) various materials, such as the materials in Group II, materials that have been removed from the stockpile list and others, for which there are no stockpile objectives. Quantities of these materials on hand are shown in Tables C and D, following.

Most of the nonspecification-grade stocks were acquired by transfer of Government-owned surplus materials. Some of these were taken under stockpile specifications now outmoded for such reasons as changes in industry practice and technological advances; others were taken with a view to processing them to specification grade if this were necessary in order to meet emergency demands. Disposal action for some of these items has been authorized by OCDM. Changes in quantities from those shown in the last report are due principally to redesignations of the stockpile unit of measure, reclassification of stockpile grades and processing of the material under the program for upgrading to higher-use forms.

TABLE C

*Strategic Stockpile Inventories of Nonspecification Grades of Materials for Which There Are Stockpile Objectives*

As of December 31, 1959

Material	Unit	Quantity
Aluminum.....	ST	1,676
Bauxite, Metal Grade, Surinam		
Type.....	LDT	24
Bismuth.....	LB	36,580
Cadmium.....	LB	1,765,200
Celestite.....	SDT	(a)
Chromite, Metallurgical Grade....	SDT	404
Cordage Fibers, Abaca.....	LB	358,259
Cordage Fibers, Sisal.....	LB	44,607
Diamond Dies, Small.....	PC	8,375
Fluorspar, Acid Grade.....	SDT	4,960
Graphite, Madagascar--Crystalline		
Fines.....	ST	1,054
Jewel Bearings.....	PC	14,715,973
Magnesium.....	ST	7,446
Manganese, Metallurgical Grade...	SDT	484,013
Mica, Muscovite Block, Stained		
A/B and Better.....	LB	348,514
Mica, Muscovite Film, 1st and 2d		
Qualities.....	LB	23,674
Nickel.....	LB	2,345,937
Opium.....	LB	2,180
Platinum Group Metals, Platinum..	TrOz	3,379
Pyrethrum.....	LB	130
Quartz Crystals.....	LB	908,938
Talc, Steatite Block.....	ST	42
Tungsten.....	LB	15,315,831
Vanadium.....	LB	475,737

Source of Data: General Services Administration.

<sup>a</sup>--Quality classification of celestite stockpile is under review.

TABLE D

*Strategic Stockpile Inventories of Materials for Which There Are No Stockpile Objectives*

As of December 31, 1959

Material	Unit	Quantity
Agar.....	LB	112,444
Bristles, Hog.....	LB	912,451
Coconut Oil.....	LB	265,835,228
Cotton, Extra Long Staple.....	LB	109,798,794
Diamond Dies, Other Than Small...	PC	355
Diamonds, Cuttables and Gems....	KT	55,461
Diamonds, Tools.....	PC	64,197
Gunyule Seeds.....	LB	17,426
Mica, Muscovite Block, Stained B		
and Lower.....	LB	4,674,994
Mica, Muscovite Film, 3d Quality	LB	493,737
Mica, Phlogopite Block.....	LB	223,013
Palm Oil.....	LB	37,609,878
Platinum Group Metals, Osmium....	TrOz	27
Platinum Group Metals, Rhodium...	TrOz	3,145
Platinum Group Metals, Ruthenium	TrOz	51
Poppy Seeds, Opium.....	LB	51,646
Quartz, Processed.....	PC	7,622,287
Quinine.....	OZ	11,988,241
Quinine, Hydrochloride of.....	OZ	1,871,759
Talc, Steatite, Ground.....	ST	6,285
Totaquine.....	OZ	7,820,275
Zirconium Ore, Baddeleyite.....	SDT	16,533
Zirconium Ore, Zircon.....	SDT	15,902

Source of Data: General Services Administration.

## Activities for the Period July-December 1959

### STOCKPILE REVIEWS

During the period July through December, the Office of Civil and Defense Mobilization continued its materials supply-requirements studies with the co-operation and assistance of the delegate agencies. As a result of these studies, the following actions were taken during the six months' period: 4 basic and 4 maximum objectives were reaffirmed, 12 basic and 13 maximum objectives were increased, 11 basic and 10 maximum objectives were decreased; objectives were established for 2 materials, corundum and sapphire and ruby, that were transferred from Group II to Group I of the List of Strategic and Critical Materials for Stockpiling; and an objective was established for kyanite-mullite which was returned to the stockpile list. Six materials were removed from the stockpile list. One of these was palm oil, a Group I material, for which the stockpile objectives were automatically canceled. The other 5 materials, which were on the Group II list without objectives, were: abrasive-grade bauxite, natural cryolite, diamond dies other than small, ground steatite talc, and titanium sponge. The strategic stockpile quantities for the palm oil, diamond dies and talc are shown in Table D, and these materials as well as the bauxite and titanium are discussed under the section, "Notes on Strategic and Critical Materials."

### PROCUREMENT

The OCDM stockpile procurement directive for the fiscal year 1960 authorizes procurement of

chrysotile asbestos, small diamond dies, jewel bearings, molybdc oxide and tungsten carbide powder. The cost of procurement is estimated to be approximately \$3 million.

GSA, the procuring agency, plans to obtain by competitive bidding quotations on low-iron chrysotile asbestos from domestic suppliers. However, because of the limited supply available that will meet stockpile specifications, it may be difficult to obtain this material from domestic sources. Procurement of the small diamond dies, which it was hoped could be achieved through domestic sources, has been deferred pending an evaluation of domestic producers' performance under previous contracts and their indicated capabilities. Contracts for the jewel bearings were placed with the Government-owned Turtle Mountain facility at Rolla, N. D., now under the custody of GSA as a part of the National Industrial Reserve. Molybdenum disulphide from Government inventory will be processed to molybdc oxide. The feasibility of acquiring tungsten carbide powder by barter is being explored in an effort to reduce the cash outlay for procurement.

Total commitments and deliveries for the strategic stockpile for the period July to December are shown by dollar value in Table E.

### PURCHASE SPECIFICATIONS AND SPECIAL INSTRUCTIONS

During the period July-December, the Office of Civil and Defense Mobilization issued five revised

TABLE E  
*Commitments and Deliveries for the Strategic Stockpile, July-December 1959*  
*Valued at December 31, 1959, Market Prices*  
(Thousands of dollars)

Source of stockpile materials	Toward basic objectives		Additional toward maximum objective increments		Total applicable to objectives	
	Commitments	Deliveries	Commitments	Deliveries	Commitments	Deliveries <sup>2</sup>
Open market.....	840	275	0	714	840	989
DPA inventories.....	0	0	0	0	0	0
CCC inventories.....	0	0	0	0	0	0
Foreign aid programs <sup>1</sup> ...	0	0	0	1,213	0	1,213
Surplus declarations <sup>1</sup> ...	0	0	0	0	0	0
Total.....	840	275	0	1,927	840	2,202

<sup>1</sup>These materials are supplied without cost to the stockpile.

<sup>2</sup>Does not include quantities delivered, valued at approximately \$14 million, that are in excess of the present stockpile objectives.

Source of Data: General Services Administration.

purchase specifications. (See Appendix C) In addition, four revised and one new special instructions were issued to the General Services Administration, giving guidance on the stockpiling of strategic materials.

Most of these revisions were brought about by the program for upgrading the strategic stockpile, to include advanced forms of stockpile materials for use in an emergency. Both industry and inter-agency advisory groups are consulted in determining the extent to which materials can be upgraded without impairing their flexibility in use in event of an emergency. Suitability for long-term storage also is a factor in determining whether the upgrading will be undertaken.

## CANCELLATION OF COMMITMENTS

In an effort to cancel commitments for deliveries of strategic and critical materials that would cause Government inventories to exceed maximum stockpile objectives, the obligation of the Government through strategic stockpile contracts was reduced by \$2,600,000 during the period July to December. Strategic stockpile contract reductions from the start of the concentrated effort in 1958 to December 31, 1959, totaled \$48,187,000. Combined with reductions of obligations under the provisions of the Defense Production Act, these bring the total reductions since 1958 to more than \$350,000,000.

## DISPOSAL PROGRAMS

Either disposal or publication of the intent to dispose of the following materials from the strategic stockpile and DPA inventories took place within the six months' reporting period: agar, alumina, aluminum, hog bristles, cadmium-magnesium scrap, castorbean seed, metallurgical chromite, abaca, hyoscyne, kyanite-mullite, pyrethrum, quartz crystals, rubber, raw silk and thorium. These activities are summarized under the section, "Notes on Strategic and Critical Materials."

Other activities with respect to disposal of the following materials are also reported under "Notes on Strategic and Critical Materials:" coconut oil, synthetic cryolite, gem diamonds, graphite, platinum group metals, titanium and zirconium ores.

Under the provisions of Public Law 86-255, the "Independent Offices Appropriation Act, 1960," some of the excess quantities of deteriorative materials in the strategic stockpile may be sold under the rotation provisions of the Stock Piling Act. The Appropriation Act provides that to the extent materials to be sold under the rotation section of the Stock Piling Act, to prevent deterioration, are excess to stockpile needs the replacement provisions of that section shall not be mandatory. During the July-December period, sales commitments for disposal of excesses of the rotation materials abaca, rubber, and raw silk, without replacement, amounted to \$20.2 million. Other sales commitments for disposal of excess and obsolete materials from the strategic stockpile and DPA inventories totaled approximately \$4 million.

These included agar, hog bristles, kyanite-mullite, pyrethrum, synthetic cryolite and thorium-bearing materials.

## STOCKPILE STORAGE AND MAINTENANCE

### Stockpile Security

A re-evaluation was begun of the strategic security of all Government-owned industrial stockpiles against loss or denial of access as a result of the effects of massive nuclear weapons attack on the United States. This study takes into account the vulnerability of materials, the proximity of storage facilities to probable targets, and a new system of measuring the probable effects on the materials of weapons and possible enemy attack capabilities some years forward. The new method of analysis, which was several years in development, is the product of the National Damage Assessment Center electronic computer system.

### Stockpile Storage Policy Revisions

To assure that high-grade strategic stockpiles are readily available near consumers for emergency, OCDM storage policies were revised in September 1959 to authorize the placement of current purchase-specification-grade receipts of materials, which may be in excess of objectives, in consuming areas until each area has its allotment of the highest quality materials. Thereafter, some reduction in transportation expense may be possible under the "least cost" provision of the revised storage policies.

### Storage Arrangements and Activity

Strategic and critical materials were stored at 215 locations on December 31, as follows:

Type of facility	As of 12/31/59	Change in last 6 months
Military depots.....	63	+1
GSA depots.....	18	0
Other Government-owned sites..	7	0
Industrial plantsites.....	39	+1
Leased commercial sites.....	13	0
Commercial warehouses.....	75	-4
Total.....	215	-2

During the six months' period, approximately 1.2 million tons of strategic materials were received and stored at the above locations. Of this total 3% was added to the strategic stockpile, 26% to DPA inventories and 71% to CCC inventories.

On December 31, 1959, Government inventories totaled about 40 million tons of materials with 27 million of this being the strategic stockpile. Based on existing contracts it is estimated that by June 30, 1960, these inventories may increase to around 42 million tons and by June 30, 1961, to about 45 million tons.

### Storage Costs

The average cost per ton of storage remains fairly low, inasmuch as the bulk of the tonnage is in metals and minerals, which can be stored in the relatively inexpensive open storage. As an example of the distribution of storage cost, comparative data for fiscal years 1959 and 1960, by type of storage, are shown for the strategic and supplemental stockpiles in Table F below.

TABLE F  
*Strategic and Supplemental Stockpiles*

	Average cost of storing materials, by fiscal year			
	1959 (actual)		1960 estimated	
	Tons (Millions)	Cost per ton	Tons (Millions)	Cost per ton
Open storage.....	25.8	\$0.076	28.9	\$0.068
Closed storage...	2.9	2.640	3.0	2.660
Tank storage.....	.3	0.860	.3	0.900
All storage.....	29.0	0.34	32.2	0.32

### Distribution Planning

Since 1949, storage plans for 105 different forms of strategic materials have been issued by OCDM and the precedent agencies responsible for stockpile planning. About 90 revisions of these plans have been issued to keep distribution of the stockpiles geographically consistent with the national expansion of related industries.

### Stockpile Maintenance

Materials that are in outdoor bulk storage and that are susceptible of deterioration or other loss have been subjected to continuing study. Several different types of covers have been developed for acid-grade fluorspar concentrates and placed in service for comparative tests. The classification of magnesium ingots into three gradations of corrosion has progressed successfully. Ultimately this will probably lead to either the rotation or disposal of the third classification indicating the

greater degree of corrosion. To minimize blow-away and run-off losses of chrome fines and concentrates, a number of piles were topped with lump ore. To control losses of some powdery bauxite, berms were constructed, decanting pipes were installed and the piles were retrimmed to provide a better angle of repose of the ore. Tungsten concentrates and other materials were drummed wherever repackaging was indicated.

### Physical Inventorying

During the period July-December 1959, inventory taking was completed at two industrial plant-sites, six GSA depots and ten military depots. This completes inventory-taking at all industrial plant-sites and commercial warehouses, with one GSA depot and twenty-one military depots not yet completed. Work at eighteen of these twenty-two depots will be completed by June 30, 1960. The remaining four depots are scheduled for completion by September 30, 1960. Funds obligated for FY 1960 will be adequate to finance these activities.

The inventorying costs are summarized by years as follows:

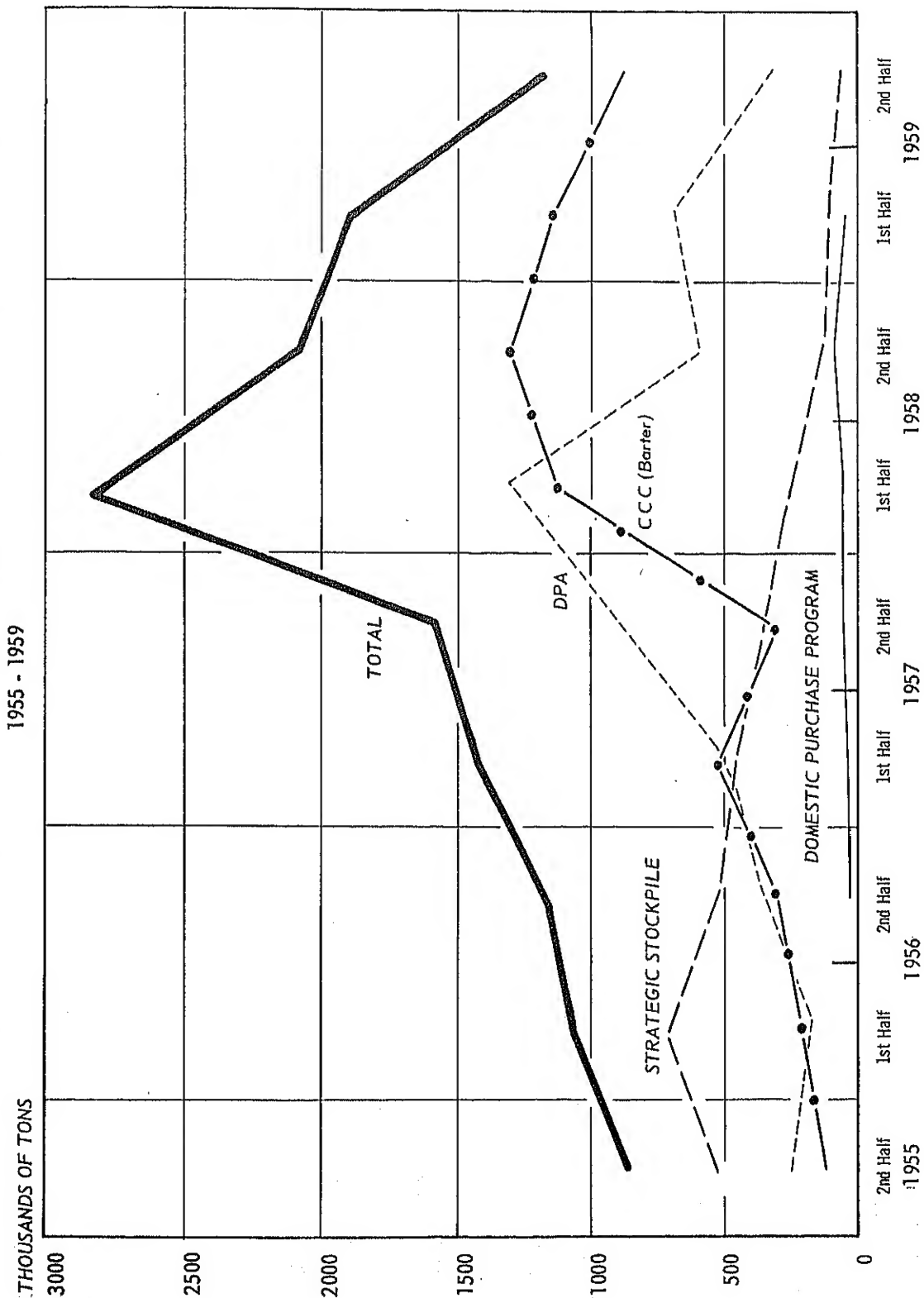
Fiscal year	Inventory taking	Restacking and restorage	Total
1957.....	\$400,732	\$1,527,212	\$1,927,944
1958.....	500,689	2,706,086	3,206,775
1959.....	781,570	4,453,096	5,234,666
1960.....	649,700	3,707,300	4,357,000
Total.....	2,332,691	12,393,694	14,726,385

### Tonnage Delivered to Government Inventories

As shown in Chart 2 below, the quantity of materials received under strategic stockpile contracts has been steadily declining since the January-June 1956 period. Despite this decline, however, a high point in storage activity for total Government-owned inventories was reached in the period January-June 1958 when almost 3 million tons of materials were received, mainly because of increased deliveries under the DPA expansion programs during the business decline in late 1957 and early 1958. Deliveries to Government inventories, which had dropped to 1.2 million tons in the July-December 1959 period, are expected to continue on the downward trend but not at such a rapid rate as in the past year, because of scheduled deliveries under the barter program.

CHART 2

TONNAGE OF STRATEGIC AND CRITICAL MATERIALS DELIVERED TO GOVERNMENT INVENTORIES





These various inventories of materials have been acquired principally under four programs, each of which stems from statutory authorizations, namely:

(1) The strategic stockpile program, under Public Law 520, 79th Congress, accumulated to meet estimated shortages in the event of an emergency.

(2) The Commodity Credit Corporation (Department of Agriculture) barter program, whereby strategic and critical materials may be acquired in exchange for surplus agricultural products. In the absence of any other use for these materials, they are transferred to the supplemental stockpile, which was authorized by Public Law 480, 83d Congress, as amended.

(3) Production expansion program, under the Defense Production Act of 1950 as amended (Public Law 774, 81st Congress), which provides that the Government, in order to assist in carrying out the objectives of the Act, purchase materials for Government use or resale.

(4) The domestic purchase program, under Public Law 733, 84th Congress, which directed the Government to purchase tungsten, asbestos, fluor-spar and columbium-tantalum as an aid to maintenance of production of these materials. The quantities acquired under this program have been transferred to the supplemental stockpile. Public Law 733 has expired.

## Notes on Strategic and Critical Materials

### AGAR

During the six months' period, 84,802 pounds of agar was disposed of, with a total recovery of \$33,206. Disposal of the remaining inventory of approximately 113,000 pounds in two lots is planned for next year. Agar was removed from the stockpile list in August 1958.

### ALUMINA

Notice for disposal of 6,015 short tons of non-specification-grade alumina was published in the Federal Register on July 29, 1959.

### ALUMINUM

During the period July-December 1959, 39,287 short tons of primary aluminum was delivered to the Government under the Defense Production Act aluminum expansion program. Contractor rights to deliver aluminum to the Government remained open on only one contract at the end of December.

In October, GSA was authorized to sell aluminum from the DPA inventory to the Atomic Energy Commission to meet its direct needs for FY 1960. This action was the first under the newly stated policy of requiring Government agencies that use strategic and critical materials directly to fulfill their requirements through the use of excess materials in Government inventories whenever such action is found to be consistent with overall disposal policies and with the best interests of the Government.

### ALUMINUM OXIDE, FUSED, CRUDE

The stockpile listing of "Abrasives, Crude Aluminum Oxide," was revised to read "Aluminum Oxide, Fused, Crude," for a more descriptive title.

### BAUXITE, ABRASIVE GRADE

Abrasive-grade bauxite was removed from Group II of the List of Strategic and Critical Materials for Stockpiling. There was no Government inventory of this material. The stockpile of the advanced form for abrasive use, fused aluminum oxide (crude), is believed to be adequate for emergency needs.

### BERYLLIUM

A potential new deposit of various beryllium minerals was discovered in the Mount Wheeler District in eastern Nevada. Occurrences of these minerals were found in underground workings originally opened up under Defense Minerals Ex-

ploration Administration exploration contracts for tungsten and lead-zinc.

### BRISTLES, HOG

During the last six months, approximately 477,757 pounds of hog bristles were sold; however, only 319,987 pounds were moved from the stockpile during the reporting period. Sales proceeds were \$3,391,450, which brings to approximately \$17,000,000 the total recovery to date under the hog bristles disposal program, which began in 1956. This material was removed from the stockpile list in August 1955.

### CADMIUM-MAGNESIUM

Notice of plans to dispose of 4,413 short tons of cadmium-magnesium scrap was published in the Federal Register of September 2, 1959. GSA plans to ask for sealed bids on this material at the termination of the six months' waiting period, with certain limitations on drawdown so as not to disturb the market.

Notice of disposal 451 short tons of magnesium scrap appeared in the Federal Register, September 2, 1959. Offers will be invited late in July 1960 on a sealed bid basis.

### CASTOR OIL

Pursuant to OCDM authorization of June 15, 1959, the Department of Agriculture disposed of the stock of castorbean seed that had been held by CCC, under Defense Production Act provisions, for emergency production purposes. The sale of these seeds, which were no longer needed for defense purposes, returned more than \$3,681,000 to the DPA account.

### CHROMITE

The notice of disposal of approximately 2,050 short tons of chromite was published in the Federal Register of August 14. This material does not conform to stockpile specifications, and is excess to the stockpile objective. The material is to be offered on a negotiated basis upon clearance for sale.

### COBALT

On September 15, 1958, the Howe Sound Co. filed an application with the Director of OCDM for an investigation under Section 8 of the Trade Agreements Extension Act of 1958, to determine the effects on the national security of imports of cobalt into the United States.

These various inventories of materials have been acquired principally under four programs, each of which stems from statutory authorizations, namely:

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Notice of disposal 451 short tons of magnesium scrap appeared in the Federal Register, September 2, 1959. Offers will be invited late in July 1960 on a sealed bid basis.

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The notice of disposal of approximately 2,050 short tons of chromite was published in the Federal Register of August 14. This material does not conform to stockpile specifications, and is excess to the stockpile objective. The material is to be offered on a negotiated basis upon clearance for sale.

### COBALT

On September 15, 1958, the Howe Sound Co. filed an application with the Director of OCDM for an investigation under Section 8 of the Trade Agreements Extension Act of 1958, to determine the effects on the national security of imports of cobalt into the United States.

Following an intensive investigation, the OCDM Director announced on October 2, 1959, in a Memorandum of Decision, that imports of cobalt were not a threat to impair the national security. In the investigation, he sought information from all interested parties and had the advice and assistance of the Departments of State, Defense, Commerce, and Interior. None of these agencies advised him of any threat to security in cobalt imports.

#### **COCONUT OIL**

The six months' waiting period for the disposal of coconut oil, which has been removed from the stockpile list, expired December 23, 1959. Approximately 14,000,000 pounds will be offered on a sealed bid basis for sale immediately after the first of the year. The remainder will be offered at the rate of 10,000,000 to 14,000,000 pounds every six weeks. Current annual consumption of coconut oil in the United States is more than 600,000,000 pounds.

#### **COPPER**

Bureau of Mines research at a mine in Michigan contributed to the development of a safe and economical mining method for extracting two ore-bearing shale beds, making possible simultaneous removal of the full column of copper ore.

#### **CORDAGE FIBERS**

Approximately 11,700,000 pounds of sisal and 14,400,000 pounds of abaca were sold during the July-December period. The total quantity of sisal represented rotation of the material, while only 5,000,000 pounds of the abaca represented replacement of inventory. The remaining 9,400,000 pounds of abaca was sold without replacement, at a value of \$2,700,000.

Late in December a letter was sent to all cordage fiber consumers and importers outlining rotation plans for the coming year and attaching a schedule of abaca and sisal available for rotation.

Liquidation of the Government-owned Central American abaca plantations is proceeding according to schedule. The final 3,000 acres were butcher-harvested during the July-December period, yielding approximately 3,000,000 pounds of fiber, which brings to 11,000,000 pounds the total final recovery from butcher-harvest of the 8,500 acres in cultivation when liquidation began in December 1958. Sale of the remaining property and complete withdrawal from the activity is anticipated by March 31, 1960, the termination date of the Abaca Act.

#### **COTTON**

Legislation is still pending in the Congress for disposal of the approximately 110,000,000 pounds of extra long staple cotton in the stockpile. Cotton

was removed from the List of Strategic and Critical Materials for Stockpiling in March 1957.

#### **CRYOLITE**

Natural cryolite was removed from the stockpile list on July 1, 1959, following a supply-requirements study that indicated no serious supply problems in the event of an emergency. There was no inventory of the natural cryolite.

Synthetic cryolite, acquired under the Defense Production Act expansion program, was again placed on the market for disposal. Although one very small sale was made in the last six months' period, there has been little industry interest because the principal aluminum producers have cryolite production facilities of their own and other aluminum producers for the most part have entered into long-term arrangements for obtaining their cryolite requirements from other sources. GSA will continue to attempt disposal; however, negotiations are underway for long-term, low-cost storage of this material.

#### **DIAMOND, INDUSTRIAL, CRUSHING BORT**

The Department of Agriculture concluded negotiations for conversion to a barter contract of a cash contract for crushing bort for the strategic stockpile, which will eventually reduce the obligations under the GSA contract by \$3,825,000, exclusive of accessorial cost.

#### **DIAMOND DIES, OTHER THAN SMALL**

This commodity was removed from the List of Strategic and Critical Materials for Stockpiling. It had been retained in Group II of the stockpile list, following the establishment of stockpile objectives for small diamond dies, pending further analysis of the supply-requirements situation.

#### **DIAMOND DIES, SMALL**

For stockpile purposes, small diamond dies were redefined as dies having diameters smaller than 0.0008 inch. When this product was placed in Group I of the List of Strategic and Critical Materials for Stockpiling in 1957, the stockpile specifications called for diameters up to .0015 inch. Delays in die deliveries under purchase contracts and failure of a high percentage of those dies that were delivered to conform to stockpile specifications were notable difficulties in the acquisition program.

#### **DIAMONDS, GEM**

On September 9, Congress approved the disposal of 55,461 carats of gem diamonds. The Bureau of Customs will conduct an auction sale under procedures established for disposal of seized diamonds.

#### **FLUORSPAR**

On September 25, the Director of OCDM announced a decision that imports of fluorspar did not threaten to impair the national security.

#### **GRAPHITE**

Because of the developing importance of artificial graphite, the stockpile listings for graphite now include the word "natural" to identify the type being stockpiled.

#### **HYOSCINE**

Notice of proposed disposal of 4,070 ounces of surplus hyoscine was advertised in the Federal Register in July.

#### **KYANITE-MULLITE**

This commodity was restored to the List of Strategic and Critical Materials for Stockpiling. Material on hand, acquired before kyanite was removed from the stockpile list in 1954, is adequate for the objectives established. Under a 1958 authorization, GSA concluded a sale of 3,664 short tons previously stored in commercial storage, which was below present stockpile quality.

#### **LEAD-ZINC**

Detailed geologic and geochemical investigations carried out by the Geological Survey over a period of years in the East Tintic mining district of Utah directly contributed to the recent discovery by a mining company of "blind" lead-zinc-silver ore bodies that may significantly increase the reserves. The discovery not only opens up a new area of this district for deep exploration but establishes the value of certain exploration techniques, which are already being applied in other districts.

Disposal of 165,273 pounds of nonspecification-grade zinc oxide has been authorized.

#### **MANGANESE**

The domestic manganese (carlot) purchases ended on August 5, 1959, upon attainment of the program quantity of 28,000,000 long tons units of contained manganese.

#### **MICA**

At the start of the period, five contracts were in effect under the Synthetic Mica Research Program. One contract expired in November and a contract with the Bureau of Standards was to terminate at the end of January 1960. Work continues by the Bureau of Mines on production of raw mica mat for possible use as capacitor film from synthetic water-swelling mica, and by two non-Government contractors on production of bonded and recrystallized synthetic mica sheets which would be used for electron tube spacers. The latter studies are being concentrated on determination of exact conditions under which the most favorable sheets can be pro-

duced and on simplification of methods for recrystallizing sheets.

#### **PALM OIL**

Palm oil was removed from the List of Strategic and Critical Materials for Stockpiling in November, on the basis of a supply and requirements study and a finding that an adequate supply of substitutes will be available in an emergency. After a survey of the steel industry the American Iron and Steel Institute reported that there would be no problem in converting to the use of palm oil substitutes in an emergency. The basic raw materials for the substitutes are modified animal fat and vegetable oil. Normal steel mill inventories of palm oil would be sufficient to meet requirements in an emergency during the period of change-over to substitutes.

Long-range plans for disposal of the entire stockpile of palm oil are under consideration. However, that part of the stockpile that should be rotated to prevent deterioration may be disposed of promptly, without replacement, under the Independent Offices Appropriation Act for 1960.

#### **PLATINUM GROUP**

Disposal of about 2,600 troy ounces of osmium, ruthenium and rhodium was authorized by Congressional action of September 19, 1959.

#### **PYRETHRUM**

During the six months' reporting period, 66,000 pounds of surplus pyrethrum was sold for a total of \$498,300. Notice of disposal of an additional quantity appeared in the Federal Register on October 24, 1959. Negotiations will start at the termination of the waiting period, in April 1960.

#### **QUARTZ CRYSTALS**

Notices of the intent to dispose of a quantity of nonspecification crystal and all wafers, blanks, and slabs were published in the Federal Registers of August 27 and November 6. GSA is completing its detailed cataloguing of this material which will be available for disposal in the first half of 1960.

#### **QUININE**

In November GSA solicited bids for 13,860,000 ounces of surplus quinine available for disposal.

#### **RUBBER**

Following several months of intensive inter-agency, industry and international consultations, OCDM authorized GSA to take the necessary action toward disposing of 470,000 long tons of rubber in excess of the maximum stockpile objective.

Notice of the intent to dispose of the rubber was published in the Federal Register of September 15, 1959. The plan as submitted to the Congress

provided for an orderly disposal over a period of about nine years. While it is planned that approximately 50,000 long tons a year may be sold, the quantities may vary according to market conditions.

The disposal requires the express approval of the Congress except for the quantities that can be disposed of under existing statutory authority which permits sale without replacement of excess stockpile materials that are subject to rotation to avoid deterioration. As of December 31, gross sales commitments under that authority amounted to \$17,000,000 covering 19,580 long tons of rubber. The general reaction to the disposal on the whole has been favorable, both domestically and abroad. Governments of the principal rubber producing countries were consulted, through the Department of State and the United States Ambassadors, in advance of the publication of the disposal plan in the Federal Register. The United Kingdom as well was consulted inasmuch as that country was also planning a rubber disposal program. The comments and suggestions of these countries were carefully considered in developing the disposal plan.

#### **SILK**

A finding that new and better materials have been developed for some of the former essential uses of silk resulted in a reduction in the stockpile objectives. In addition, there was a determination that a stockpile of silk waste was no longer needed as the stockpile of silk noils, which are less costly than the waste, is now adequate for the purposes for which the waste was stockpiled.

Pursuant to the finding that silk should be rotated, 186,500 pounds of raw silk was sold, 89,000 pounds of which will not be replaced as the stockpile inventory exceeds the maximum objective. An effort will be made to replace the remaining quantity through the CCC barter program.

#### **SPECIAL-PROPERTY MATERIALS**

The various Government agencies continued their reviews of the supply-requirements position of special-property materials as a part of the surveillance program to determine whether a mobilization deficit may develop as a result of technological advances or for other reasons. Based on present information, prospective supply appears to be adequate for a war emergency.

#### **TALC, STEATITE GROUND**

This material was removed from the Group II List of Strategic and Critical Materials for Stockpiling in October 1959.

#### **THORIUM-BEARING MATERIALS**

A small quantity of thorium fractions was sold from the DPA inventory during this period. Efforts will be continued to dispose of rare earths and thorium fractions now available or to be generated as a result of production of columbium-tantalum pentoxides under Government contract.

#### **TIN**

Notice of disposal covering 537 long tons of tin alloy (copan) was published August 13, 1959.

#### **TITANIUM SPONGE**

This material was removed from the List of Strategic and Critical Materials for Stockpiling in October 1959. There was no titanium in the strategic stockpile. Disposal of 35,073 pounds of 170 to 220 Brinell hardness titanium sponge in DPA inventory was authorized, and sealed bids were received on two different occasions late in 1959; however, no bids were satisfactory and all were rejected. Negotiations for better offers will continue.

The Bureau of Mines continued work on refinement of the operation of a 10,000 ampere unit for the electrorefining of titanium, with increasing prospects for the success of the process. A private research corporation, under Government contract, encountered some difficulties in getting into operation its explosion-proof skull-type furnace for melting titanium and for scrap recovery. The first ingot was poured successfully in December and it is anticipated that the program will be completed early in 1960. Arrangements have been made to have the ingots evaluated in the Department of the Army's Frankford Arsenal Laboratories when the series is completed.

#### **ZIRCONIUM ORES**

In September, 16,533 short tons of baddeleyite was cleared for sale. The first invitation, which covered 1,343 short tons, yielded no bids. a subsequent solicitation for proposals to negotiate was then issued. In April 1960, 6,200 short tons will be offered and the remainder is scheduled for sale between October 1960 and September 1961.

Also in September, the sale of 15,902 short tons of zircon concentrates was cleared. All bids received in response to the invitation were rejected as unfavorable. Negotiations will be conducted with those who respond to the subsequent solicitation for proposals. About 1,500 short tons will be offered in April 1960 and 8,990 short tons between October 1960 and September 1961.

# Appendix A

## FINANCIAL SUMMARY OF STOCKPILE OPERATIONS AS OF DECEMBER 31, 1959

TABLE 1 STATUS OF OBLIGATIONAL OPERATIONS

AS OF DECEMBER 31, 1959

AUTHORITY	APPROPRIATED FUNDS <sup>a/</sup>	AUTHORIZATIONS FOR		TOTAL OBLIGATIONAL AUTHORITY (CUMULATIVE) <sup>d/</sup>
		MAKING ADVANCE CONTRACTS <sup>b/</sup>	LIQUIDATING OUTSTANDING ADVANCE CONTRACTS <sup>c/</sup>	
Under PL 117 - 76th Congress				
PL 361 - 76th Congress, August 9, 1939	\$ 10,000,000	\$		\$ 10,000,000
PL 442 - 76th Congress, March 25, 1940	12,500,000			22,500,000
PL 667 - 76th Congress, June 26, 1940	<u>47,500,000</u>			<u>70,000,000 <sup>e/</sup></u>
Under PL 520 - 79th Congress				
PL 663 - 79th Congress, August 5, 1946	100,000,000	-	-	100,000,000
PL 271 - 80th Congress, July 30, 1947	100,000,000	75,000,000	-	275,000,000
PL 785 - 80th Congress, June 25, 1948	225,000,000	300,000,000	-	800,000,000
PL 785 - 80th Congress, June 25, 1948	75,000,000	-	75,000,000	800,000,000
PL 119 - 81st Congress, June 23, 1949	40,000,000	270,000,000	-	1,110,000,000
PL 150 - 81st Congress, June 30, 1949	275,000,000	250,000,000	-	1,635,000,000
PL 150 - 81st Congress, June 30, 1949	250,000,000	-	250,000,000	1,635,000,000
PL 436 - 81st Congress, October 29, 1949	-	-	100,000,000 <sup>f/</sup>	1,535,000,000
PL 759 - 81st Congress, September 6, 1950	365,000,000	-	240,000,000	1,660,000,000
PL 759 - 81st Congress, September 6, 1950	240,000,000	-	240,000,000	2,025,000,000
PL 843 - 81st Congress, September 27, 1950	573,232,449 <sup>g/</sup>	125,000,000	-	2,598,232,449
PL 911 - 81st Congress, January 6, 1951	1,834,911,000	-	-	4,433,143,449
PL 253 - 82nd Congress, November 1, 1951	590,216,500	-	-	5,023,359,949
PL 253 - 82nd Congress, November 1, 1951	200,000,000	-	200,000,000	5,023,359,949
PL 455 - 82nd Congress, July 25, 1952	203,979,000	-	70,000,000	5,157,338,949
PL 176 - 83rd Congress, July 31, 1953	-	-	30,000,000	5,127,338,949
PL 428 - 83rd Congress, June 24, 1954	-	-	27,600,000	5,099,738,949
PL 663 - 83rd Congress, August 26, 1954	379,552,000 <sup>h/</sup>	-	-	5,479,690,949
PL 112 - 84th Congress, June 30, 1955	321,721,000 <sup>i/</sup>	-	-	5,801,411,949
PL 112 - 84th Congress, June 30, 1955	27,400,000	-	27,400,000	5,801,411,949
PL 846 - 85th Congress, August 28, 1958	3,000,000	-	-	5,804,411,949
Reincited by PL 255 - 86th Congress, September 14, 1959	<u>58,370,923</u>	<u>-</u>	<u>-</u>	<u>5,726,041,026</u>
Total PL 520	<u>5,726,041,026 <sup>j/</sup></u>	<u>1,020,000,000</u>	<u>1,020,000,000</u>	<u>5,726,041,026</u>
Total PL 117 and PL 520	<u>5,816,041,026 <sup>k/</sup></u>	<u>1,020,000,000</u>	<u>1,020,000,000</u>	<u>5,816,041,026</u>

<sup>a/</sup> Congressional appropriations of funds for stockpiling purposes.  
<sup>b/</sup> Congressional appropriations of contracting authority for stockpiling purposes in advance of appropriation of funds.  
<sup>c/</sup> Congressional appropriations of funds for stockpiling purposes in advance of appropriation of funds.  
<sup>d/</sup> Cumulative total of appropriated funds and advance contract authorization less authorization to liquidate outstanding advance contracts.  
<sup>e/</sup> Excludes \$8,845,792 received from sale of stockpile materials for wartime consumption. Receipts were returned to Treasury, February 1948.  
<sup>f/</sup> Cancellation of previously authorized authority to make contracts.  
<sup>g/</sup> Excludes \$25,400,921 transferred to operating expenses for rehabilitation of Government-owned material producing plants.  
<sup>h/</sup> Excludes \$48,000 transferred to Transportation and Public Utilities Service, CSA.  
<sup>i/</sup> Excludes \$430,000 transferred to Transportation and Public Utilities Service, CSA and \$199,349,000 transferred to General Fund Receipts on June 27, 1956 - PL 623 - 84th Congress.  
<sup>j/</sup> Excludes receipts from rotational sales.

Source: General Services Administration



TABLE 2 TOTAL OBLIGATIONS AND EXPENDITURES OF STOCKPILING FUNDS  
CUMULATIVE AND BY FISCAL PERIOD, THROUGH DECEMBER 31, 1959

FISCAL PERIOD	A/ Obligations Incurred		B/ Expenditures	
	Net Change By Fiscal Period	Cumulative As of End of Period	By Fiscal Period	Cumulative As of End of Period
Prior to Fiscal Year 1948	\$ 123,871,685	\$ 123,871,685	\$ 66,330,731	\$ 66,330,731
Fiscal Year 1948	252,901,411	376,773,096	82,907,575	149,238,306
Fiscal Year 1949	459,766,881	836,539,977	304,486,177	453,724,483
Fiscal Year 1950	680,427,821	1,516,967,798	440,834,970	894,559,453
Fiscal Year 1951	2,075,317,099	3,592,284,897	655,537,199	1,550,096,652
Fiscal Year 1952	948,117,547	4,540,402,444	844,683,459	2,394,780,111
Fiscal Year 1953	252,375,163	4,792,777,607	906,158,850	3,300,938,961
Fiscal Year 1954	116,586,681	4,909,364,288	644,760,321	3,945,699,282
Fiscal Year 1955	321,799,833	5,231,164,121	801,310,094	4,747,009,376
Fiscal Year 1956 C/	251,692,667	5,482,856,788	382,011,786 C/	5,129,021,162 C/
Fiscal Year 1957	190,000,109	5,672,856,897	354,576,558	5,483,597,720
Fiscal Year 1958	54,473,250	5,727,330,147	173,753,997	5,657,351,717
Fiscal Year 1959	38,710,879	5,766,041,026	65,260,098	5,722,611,815
Fiscal Year 1960 - First Half	8,757,684	5,774,798,710	27,942,504	5,750,554,319

A/ Figures are the sum of obligations incurred under PL 520, 79th Congress and PL 117, 76th Congress.  
Final obligations under PL 117, 76th Congress were incurred in Fiscal Year 1949.

B/ Figures are the sum of expenditures under PL 520, 79th Congress and PL 117, 76th Congress.  
Final expenditures under PL 117, 76th Congress were made in Fiscal Year 1951.

C/ 1956 and subsequent fiscal periods and cumulative expenditures are reported on an accrual basis.

SOURCE: GENERAL SERVICES ADMINISTRATION

TABLE 3 EXPENDITURES OF STOCKPILING FUNDS, BY TYPE  
CUMULATIVE AND FOR FISCAL YEAR 1960

TYPE OF EXPENDITURE	CUMULATIVE THROUGH JUNE 30, 1959 <u>a/</u>	SIX MONTHS ENDED DECEMBER 31, 1959	CUMULATIVE THROUGH DECEMBER 31, 1959 <u>a/</u>
Expenditures			
Gross Total	\$6,263,830,170	\$27,942,504	\$6,291,772,674
Less: Adjustments for Receipts from Rotation Sales and Reimbursements	541,218,355	0	541,218,355
Net Total	5,722,611,815	27,942,504	5,750,554,319
Material Acquisition Costs, Total	5,420,846,559	2,983,926	5,423,830,485
Stockpile Maintenance Costs, Total	263,185,076	22,946,531	286,131,607
Facility Construction Storage and Handling Costs	43,772,457	0	43,772,457
Net Rotation Costs	166,699,787	7,566,087	174,265,874
	52,712,832	15,380,444	68,093,276
Administrative Costs	38,580,180	1,548,653	40,128,833
Operations, Machine Tool Program	0	463,394	463,394

a/ Cumulative figures are the total of expenditures under PL 117, 76th Congress and PL 520, 79th Congress. Expenditures under PL 117, 76th Congress totaled \$70,000,000, of which \$55,625,237 was for materials acquisition costs and \$14,374,763 was for other costs. Final expenditures under PL 117 were made in FY 1951.

SOURCE: GENERAL SERVICES ADMINISTRATION

## Appendix B

### Title 32A—NATIONAL DEFENSE, APPENDIX

#### Chapter I—Office of Civil and Defense Mobilization

[D.M.O. V-3 Cancelled]

#### DMO V-3—POLICY REGARDING SURPLUS MATERIALS ACQUIRED UNDER THE DEFENSE PRODUCTION ACT

[D.M.O. V-7, Revised]

#### DMO V-7—GENERAL POLICIES FOR STRATEGIC AND CRITICAL MATERIALS STOCKPILING

By virtue of the authority vested in me by Reorganization Plan No. 1 of 1958 and Executive Order 10773, it is hereby ordered:

1. *General role of the strategic stockpile.* The strategic stockpile shall take account of the potentiality of limited war and general war and shall assume rapid mobilization in the event of an emergency.

2. *Period covered by stockpiling.* All strategic stockpile objectives shall be limited to meeting estimated shortages of materials for a three-year emergency.

3. *Stockpile objectives.* Strategic stockpile objectives shall be adequate for limited or general war, whichever shows the larger supply-requirements deficit to be met by stockpiling. Stockpile objectives shall be determined on the basis of time required for supplies of materials in a national emergency to match essential needs of the emergency. The objectives shall consist of (1) a "basic objective," which assumes reliance on sources of supply factored to reflect estimated supply risks, and (2) a "maximum objective," which includes an additional allowance to take into account the complete discounting of sources of supply beyond North America and comparably accessible areas.

Until such time as the essential needs of the nation in the event of a nuclear attack (including reconstruction) can be determined, the maximum objective shall not be less than six months' usage by industry in the United States in periods of active demand.

4. *Emergency requirements.* The requirements estimates for both limited and general war shall reflect specific requirements so far as they are applicable and available. Otherwise it shall be assumed that the total requirements would about equal the consumption by industrial capacity, considering necessary wartime limitation, conservation, and substitution measures. Requirements shall be discounted for wartime losses of consuming capacity to the extent that such losses can be reliably estimated.

5. *Emergency supplies.* Estimates of supply for the mobilization period shall be based on readily available capacity and known resources. The share available to the United States shall be discounted to reflect the risks involved internally in supply countries, the risks of concentration of the source, the risks of overseas shipping and the vulnerability of domestic sources to destruction. Domestic supplies shall be discounted in cases of excessive concentration to the extent of the estimated time required to restore capacity that may be damaged.

6. *Provision for special-property materials.* Prospective needs for high-temperature and other special-property materials shall be considered on the basis of a three-year period beginning not more than two years in the future. Estimates of requirements therefor shall be included in the computation of objectives when there are indications of reasonably firm minimum requirements. In this connection arrangements shall be made for the regular availability of objective

scientific advice to assist in such evaluation.

7. *Frequency of supply-requirements reviews.* The supply-requirements balance for any material that is now or may become important to defense shall be kept under continuing surveillance and shall be given a full-scale review at any time that a change is believed to be taking place that would have a significant bearing on the wartime readiness position. Supply-requirements balances shall be examined at least once a year to ascertain the need for a full-scale review. Priority of review shall be given to materials under procurement.

8. *Procurement policy.* The basic objectives shall be attained expeditiously. If necessary, sources of supply shall be expanded. Procurement, however, shall be tapered as the basic objectives are approached. The maximum objective shall be reached on a lower priority basis by such means as (1) deliveries under existing contracts, (2) transfers from other Government programs, (3) purchases with available foreign currencies, (4) barter of U.S. agricultural surpluses, and (5) programs to maintain the mobilization base under paragraph 9. Future long-term contracts shall contain termination clauses whenever possible.

9. *Maintenance of the mobilization base.* The mobilization base shall relate to the projected supply capacity, including standby capacity, that would be readily available for an emergency commencing on any assumed date rather than to the output of a given period. Stockpile procurement to maintain this capacity shall be undertaken only within the maximum objective. Although various measures that are feasible shall be considered for meeting a mobilization deficit of materials, measures other than stockpiling shall be undertaken only after it is clear that stockpiling is not the best solution. All inventories of Government-owned materials held for long-term storage are a part of the mobilization base. If they are sufficiently large they may eliminate the need for a producing mobilization base segment.

10. *Upgrading to ready usability.* Where the general basis for estimating supplies of a material, including allowance for plant vulnerability, does not call for a sufficient quantity in a form suitable for immediate use to meet the initial surge of demand and abnormal conditions of intensive mobilization, a minimum readiness inventory—approximately a six months' requirement—shall be provided near centers of consumption. An interagency review should be undertaken to determine whether a need for a larger or lesser allowance may exist. Materials in Government inventories may be upgraded only when the net cost is less than the cost of new material. Materials will not be upgraded to such a degree, however, as to impair flexibility of use. Payment in kind may be used within the objectives to finance the upgrading, provided that the release of materials to pay for the upgrading will meet disposal criteria.

11. *Beneficiation of subspecification materials.* Subspecification-grade material in Government inventory may be beneficiated within the limits of the maximum objectives when this can be accomplished at less net cost than buying new material.

12. *Cancellation of commitments.* Commitments for deliveries to national stockpile and Defense Production Act inventories beyond the maximum objectives shall be canceled or reduced when settlements can be arranged which would be mutually satisfactory to the supplier and the Government and which would not be disruptive to the economy or to projects essential to the national security. Such settlements may take into account anticipated profits and cover adjustments for above-market premiums.

The settlement of commitments may be made through the payment of cash or through the application of surplus property or resale of materials. Responsibility with respect to the settlement of commitments in the light of over-all interests of the Government rests with the Administrator of General Services, who shall keep other agencies advised and consult with them to the extent appropriate.

13. *Retention of Defense Production Act inventories.* Within the limits of unfilled maximum stockpile objectives, stockpile-grade materials acquired under the Defense Production Act shall be retained for national stockpile purposes.

14. *Disposals.* The Director of the Office of Civil and Defense Mobilization will authorize the disposal of excess materials whenever possible under the following conditions: (a) avoidance of serious disruption of the usual markets of producers, processors, and consumers, (b) avoidance of adverse effects on international interests of the United States, (c) due regard to the protection of the United States against avoidable loss, and (d) except when the materials are channeled to other agencies for their direct use, approval of the Departments of the Interior, Commerce, State, Agriculture, and Defense, and other governmental agencies concerned, and consultation as appropriate with the industries concerned.

In making such disposals preference shall be given to materials in the DPA inventories.

Disposals of materials that deteriorate, that are likely to become obsolete, that do not meet quality standards, or that do not have stockpile objectives, are to be expedited.

The Administrator of General Services shall be responsible for conducting negotiations for the sale of materials and will consult with and advise the agencies concerned.

15. *Public notice on disposals.* Generally, the sale of excess materials acquired under the Defense Production Act will be made only after appropriate public announcement of the quantity or quantities to be offered in a specified period of time.

16. *Direct Government use.* Government agencies which directly use strategic and critical materials shall fulfill their requirements through the use of materials in Government inventories that are excess to the needs thereof whenever such action is found to be consistent with overall disposal policies and with the best interests of the Government. Except where appropriate in the judgment of the Administrator, General Services Administration, the requirements of section 14, above, with respect to approval by Government departments or agencies and consultation with industries, shall not be applicable to transfers of strategic and critical materials for direct Government use.

17. *Declassification of stockpile data.* The Office of Civil and Defense Mobilization shall declassify stockpile data to the maximum extent feasible when it determines with the concurrence of agencies concerned that the national security would not thereby be jeopardized.

Defense Mobilization Order V-3 (19 F.R. 1511, Mar. 19, 1954) is hereby canceled.

Defense Mobilization Order V-7 (23 F.R. 4333, June 14, 1958) is hereby superseded.

These policies are effective immediately.

Dated: December 10, 1959.

LEO A. HOSCH,  
Director, Office of Civil  
and Defense Mobilization.

[F.R. Doc. 59-10745; Filed, Dec. 18, 1959;  
8:45 a.m.]

(Reprinted from THE FEDERAL REGISTER of December 19, 1959)

## Appendix C

### CHANGES IN STOCKPILE PURCHASE SPECIFICATIONS JULY-DECEMBER 1959

Number	Item	Date of revision
P-4-R2	Asbestos--Amosite .....	August 4
P-15-R2	Columbite .....	July 27
P-74-R4	Molybdenum .....	July 21
P-83a-R1	Silk--Raw.....	August 14
P-54-R2	Tantalum Minerals .....	July 27

## Appendix D

### REPORTS ISSUED BY THE DEPARTMENT OF THE INTERIOR JULY-DECEMBER 1959

#### BUREAU OF MINES

##### Bulletins

- 585 Mineral Facts & Problems: Preprint Chapters on Quartz Crystal; Talc, Soapstone, and Pyrophyllite.

##### Reports of Investigations

- 5462 Operations of Manganese-Ore-Purchasing Depots at Deming, N. Mex., and Wenden, Ariz.  
5472 Manganese Deposits of Northeastern Oregon.  
5490 Metallurgical Thermochemistry of Titanium.  
5491 Refractory Properties of Alabama Bauxitic Kaolins.  
5493 Tin Placer and Lode Investigations, Ear Mountain Area, Seward Peninsula, Alaska.  
5494 Electrorefining Titanium, Using an Internally Heated Cell.  
5496 The Nicaro (Cuba) Nickel Ores; Basic Studies, Including Differential Thermal Analyses in Controlled Areas.  
5499 Zirconium-Hafnium Separation.  
5501 Treating Oxidized and Mixed Oxide-Sulfide Copper Ores.  
5502 Low-Temperature Heat Capacities of Copper Ferrites (With a Summary of Entropies at 298.15°K. of Spinel Minerals).  
5503 Application of Electrical-Resistivity Surveys to Exploration for Zinc-Lead Deposits, Racine-Surgeon Area, Newton County, Mo.  
5508 Operation of a Dithionate-Process Pilot Plant for Leaching Manganese Ore from Maggie Canyon Deposit, Artillery Mountains Region, Mohave County, Ariz.  
5510 Low-Temperature Heat Capacity and High Temperature Heat Content of Cerous Fluoride.  
5512 Titanium Minerals in the Heavy Sand Deposits of Assateague Island, Md.  
5513 Liquid-Liquid Extraction of Cerium.  
5518 Exploration of Lead-Zinc Deposits in the Ross Basin-Lake Como Area, San Juan County, Colo.  
5520 Sampling Stream Gravels for Tin, Near York, Seward Peninsula, Alaska.  
5521 Extraction of Yttrium and Rare-Earth Elements from a Euxenite Carbonate Residue.  
5523 Separation of Rare-Earth Elements in Bastnasite, by Ion Exchange.  
5525 Thermochemistry of Samarium.  
5526 X-Ray Emission Spectrographic Analysis of High-Purity Rare-Earth Oxides.  
5531 Extractive Metallurgy of Euxenite.  
5532 Nickel-Cobalt-Iron-Bearing Deposits in Puerto Rico.  
5536 Development of Equipment and Process for Extracting Cerium.  
5539 High-Purity Tungsten by Fluoride Reduction.  
5540 Preparation of Rare-Earth Chloride Solutions.

##### Information Circulars

- 7907 Mining Methods and Costs, Lincoln Tungsten Mine, Wah Chang Mining Corp., Lincoln County, Nev.  
7911 Open-Pit Copper Mining Methods, Morenci Branch, Phelps Dodge Corp., Greenlee County, Ariz.  
7912 Milling and Processing Tungsten.  
7930 Mining Methods and Costs at the Piokee Mining Unit and the Piokee Experimental Mining Project, The Eagle Picher Co. (Tri-State Mines), Ottawa County, Okla. (Lead and zinc).  
7941 Mercury. A Materials Survey.

## U. S. GEOLOGICAL SURVEY

### Professional Papers

- 318 Occurrence of nonpegmatite beryllium in the U. S.  
320 Geochemistry and mineralogy of the Colorado Plateau uranium ores. (Uranium, vanadium)

### Bulletins

- 1069 Geology of the Thomas Range fluorspar district, Juab County, Utah.  
1072-F Mineral occurrences of New York State with selected references to each locality. (Asbestos, beryl, copper, etc.)  
1072-I Beryl deposits of the Beecher No. 3-Black Diamond pegmatite, Custer County, South Dakota.  
1083-B Directional resistivity measurements in exploration for uranium deposits on the Colorado Plateau. (Uranium, vanadium)  
1084-C Selenium content of some volcanic rocks from Western United States and Hawaiian Islands.  
1087-A Geology of the Garo uranium-vanadium-copper deposit, Park County, Colorado.

### Reports Placed on Open File for Public Inspection

Steatization of serpentinite bodies in north-central Vermont. (Talc)  
Antimony, bismuth, and mercury in Alaska.  
Chromite, cobalt, nickel, and platinum in Alaska.  
Copper, lead, and zinc in Alaska.  
Molybdenum, tin, and tungsten in Alaska.

### Maps

- GQ-124 Geology of the Fairbanks (D-1) quadrangle, Alaska. (Quartz, mica, feldspar, etc.)